



INTERNET TOOLS

for Planning,
Conservation &
Environmental Protection

Article 12

In an effort to increase awareness of web-based resources available to local governments and citizen planners, the Wisconsin Department of Natural Resources (WDNR) has initiated a technical assistance program focused on Internet tools for planning, conservation, and environmental protection. This program has been made possible by a water quality management grant awarded to WDNR by the U.S. Environmental Protection Agency (EPA).

As part of our technical assistance program we have developed this series of articles. **Each article will highlight a different tool, discuss its possible uses, and offer step-by-step tutorials.** It is our hope that the information provided here will insure that all involved in local planning processes have equal access to valuable information and analysis tools. Gaining access to these free web-based planning tools will assist communities with preliminary selection of alternative approaches to watershed and community planning. When community planners, developers, and citizens have access to similar information they are more readily able to interact and jointly discover possible solutions to land use issues.

This series of articles can be found online at <http://dnr.wi.gov/org/es/science/landuse/CompTools/local.htm>

Air Quality Data

With asthma rates nearly tripling over the past two decades the need for timely air quality data is very high. Access to this data can provide sensitive individuals the opportunity to adjust their daily activities in order to minimize adverse impacts to their health. In this article we explore two Internet mapping tools for finding and accessing air quality data. EPA's AIRNow and WDNR's Air Monitoring Network websites provide the public with easy access to air quality information. These federal and state efforts both use the Air Quality Index (AQI) as a means for reporting daily air quality and notification of steps that can be taken to reduce exposure to pollution.

Air Quality Index

Using a scale that runs from 0 to 500, AQI is an index that reports how clean or polluted outdoor air is and what associated health effects might be a concern for people.

AQI focuses on health effects individuals may experience within a few hours or days after breathing polluted air. AQI is calculated for five major air pollutants regulated by the Clean Air Act: ground-level ozone, particle pollution, carbon monoxide, sulfur dioxide, and nitrogen dioxide. For each of these pollutants, EPA has established national air quality standards to protect public health. The highest pollutant drives the AQI classification. Ground-level ozone and airborne particles are the two pollutants that pose the greatest threat to human health in this country.

AIRNow

The federal AIRNow website was developed through a combined effort by the EPA, the National Oceanic & Atmospheric Administration, the National Park Service, and tribal, state, and local agencies as a way to provide national air quality information. AIRNow offers interactive maps of national and local air quality forecasts and current conditions for over 300 cities across the U.S. Users can also view an interactive map of cities with Action Days (called when AQI is in the unhealthy ranges), view images from air quality web cams, and explore additional air quality resources. Available resources target children and adults, health providers, teachers, weathercasters, and partner agencies.

Air Monitoring Network

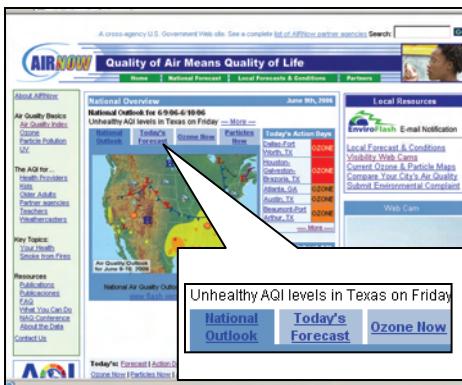
WDNR's Air Monitoring Network is a state initiative for providing access to air quality data that mimics EPA's AIRNow website. Currently there are 34 ground-level ozone, 11 particle pollution, and 3 sulfur dioxide monitoring stations in Wisconsin supplying data to the Air Monitoring Program's Wisconsin Aerometric Retrieval Data System (WISARDS) database. The Air Monitoring Network is updated with current conditions twenty minutes past the hour using data from the WISARDS database.

Users have the ability to run reports and view interactive maps of current or historic monitoring data, access advanced reports through the WISARDS database, and follow links containing more information on air quality, including EPA's AIRNow website. Future features include graphing functions, map animations, and the posting of air quality watches and advisories.

Example use of AIRNow

Using your Internet browser, go to www.airnow.gov.

Click “National Outlook” to get the national AQI forecast, similar to a weather forecast.



Then, click “Cities with Action Days” just above the national forecast map to open an interactive mapping application displaying all monitored cities and indicating whether or not they have an Action Day.

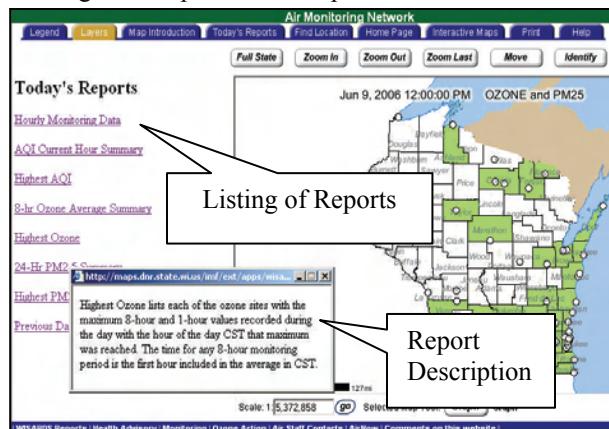
Navigate in the map using zooming and panning functions. Turn map layers on and off to display cities with and without Action Days. Clicking on a city will open a window containing more city-specific air quality information and links to state resources.



Example use of the Air Monitoring Network

Go to <http://dnr.wi.gov/org/aw/air/MONITOR/index.htm> in any Internet browser to access the Air Monitoring Network’s homepage. Click “Current Air Quality” in the left-hand column to start the mapping application.

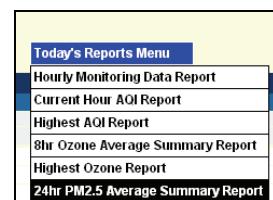
After the mapping application opens, click “Today’s Reports” to view the list of available reports. From the report menu select the “Highest Ozone” report. Holding the cursor over a report name will open a display window containing a description of the report.



After selecting the report a new window will open, redirecting you to the WISARDS database. The results appear automatically with a highlighter over the data row making it easy to read.



Quickly run other reports as well using the “Today’s Report Menu” in the WISARDS database.



For More Information:

WDNR's land use website

www.dnr.state.wi.us/org/es/science/landuse



Midwest Spatial Decision
Support System Partnership

www.epa.gov/waterspace



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